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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,471	02/09/2004	William E. Sobel	20423-08314	1357

34415 7590 03/14/2008
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EXAMINER

VU, TUAN A

ART UNIT	PAPER NUMBER
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2193

NOTIFICATION DATE	DELIVERY MODE
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03/14/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/775,471	Applicant(s) SOBEL, WILLIAM E.	
	Examiner Tuan A. Vu	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-15,17-20,22-26 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-15,17-20,22-26 and 28-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 12/27/07.

As indicated in Applicant's response, claims 1, 3-4, 10, 14, 19-20, 22-23, 26, 28-30 have been amended, and claims 2, 16, 21, 27 canceled. Claims 1, 3-15, 17-20, 22-26, 28-32 are pending in the office action.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 20, 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9, 37 of copending Application No. 10,642,355 (hereinafter '355) in view of Sobel, USPN: 6,205,558 (hereinafter '558).

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following observations.

Following are but a few examples as to how the certain claims from the instant invention and from the above copending application are conflicting.

As per instant claim 1, '355 claim 9 also recites method for roll-back via managing rollback with determination whether rollback is secure, performing actions prior to or during rollback if roll-back state is not secure; and rolling back responsive to a state being managed or monitored. Claim 9 does not explicitly disclose (i) rollback manager to store in a non-reversible storage a *reboot indicator* during deployment of a modification, and responsive to the indicator, rolling the system state back to a restore point; (ii) nor does '355 claim 9 recite determining whether the reboot is expected or unexpected during deployment of a modification, and responsive to an unexpected reboot determination, rolling back the system to a restore point.

As for (i), '355 claim 9 recites restoring to a rollback state hence has taught rolling back system state to a restore point; and performing remediation actions prior to or during roll-back when determining that roll-back state is not secure, the determining as to whether this rollback is secure based on a security definition in a repository providing data to the roll-back state. First, '355 claim 9's determination based on a stored definition providing data for the rollback would be a obvious variant of instant claim 1 'reboot indicator in a non-reversible storage'. The remediation provided a rollback management software based on some indicator as suggested by '355 for supporting a update/deployment process failure was known concept; that is, Sobel discloses a reboot indicator via a GUI event (e.g. *rebooted 414 ... by a user* - col. 4, lines 26-37 Note: such GUI command reads on monitored event being captured as data in a non-reversible storage – such as GUI instance) based on which a rollback management process remedy to a non-successful upgrade or deployment of an upgrade process. It would have been obvious for

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one skill in the art at the time the invention was made to implement '355 interface so that the remediation actions include receiving indicator event (as taught by Sobel) to be monitored by a roll-back *manager* such that the reboot command can effectuate remediation directive needed in order to support the subsequent execution by the roll back action per se by '355.

As for (ii) and the language regarding 'unexpected rollback' or 'expected rollback', one of ordinary skill would understand that *expected rollback* means that no potential conflict to the intended deployment is envisaged; and that *unexpected rollback* signifies a situation where deployment would be prone/subject to more conflicts and unsecure state, as suggested by vulnerability and instability of the system in '355 via claim 9 reciting of 'whether the roll-back state is secure ... would be ... worth of vulnerable to ... attack ... compromised state as a result of ... external attack'. The vulnerability or compromised *state determination* context in '355 would be a obvious variant of the language recited as secure state of 'expected rollback' or not secure state of 'unexpected rollback'; i.e. '355 *vulnerable, compromised* state signifying that a contemplated rollback would not be expected -- *unexpected rollback* -- to secure the system after modification is deployed to the system. One of ordinary skill in the art would implement determining of rollback secure state as in '355 in way that when potential conflicts, as in *unexpected rollback* (interpreted above from instant claim 1) from deploying an ongoing modification, are identified a remedying rollback would be needed (i.e. '355 'performing remediation actions' or Sobel rollback). Hence, as a whole, '355 claim 9 is deemed a obvious variant of instant claim 1, in view of Sobel and in view of the above analysis.

Instant claims 20 and 26 are medium and system version of instant claim 1; and '355 claim 37 is a Beauregard version of '355 claim 9. In light of the rationale set forth above using

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Sobel and analogous functionality (between instant claim 1 and '355 claim 9; i.e. based on variant of language) instant claims 20, 26 are obvious over the language of '355 claim 9 or 37.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the following indefinite sequence: 'reading performed after a reboot of the computer, and the reading performed before the booting ...' (lines 6-7). One of ordinary skill in the art would not be apprised on whether the *reading* to determine on the legitimacy of the reboot is prior to or subsequent to some reboot of the system. There is no utility or implementation detail in the Specifications that explicitly puts forth a particular state involving simultaneously (a) the computer system, and (b) the OS, regarding booting of each. That is, missing is a depiction that would depict one **indicator reading** step/situation with proper utility that clearly establishes a time relationship and a state (of reading incurred) between what representing an after-reboot of (a) over a prior-reboot of (b) as recited ;that is, such lack of teaching not enabling one of ordinary skill in the art to grasp the time-related metes and bounds of *reading* step as recited. Nowhere does the Specifications deliberately provide a clear and

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separate redefinition of 'booting of OS' and 'reboot of computer', each of which, for one of ordinary skill in the art amounting to a **same** (emphasis added) state or same process acting on a same entity, thus rendering the claim all the more obscure to interpretation. This reading step based on the time relationship as claimed would be deemed unsupported, and this 'after a reboot/prior to the booting' requirement in the claim will be treated as though the reading is done prior to recovery, hence subsequent to any restart of a system under upgrade and **prior to** a any potentially plurality of as-needed reboots. Lacking proper definite teaching, the claim remains improper as to statutorily establish the true extent of what is deemed *metes and bounds* part of the Invention exactly as it was conceived. Claims 14 and dependent 16 are hence rejected for leading to an indefinite language that is rendering any usage of the invention hampered.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-15, 17-20, 22-26, 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobel, USPN: 6,205,558 (hereinafter Sobel)

As per claim 1, Sobel discloses a computer implemented method for rolling back a system state after a modification failure, the method comprising the steps of:

a rollback manager creating a restore point on a computer (e.g. col. 2, lines 56-65; Fig. 2-3 Note: state G and K in Fig. 3 read on recovering to restore a previous stable point G);

the rollback manager monitoring a reboot indicator (e.g. col. 4, lines 31-34 – Note: event due to system failure prompting users for a reboot, or event forcing an automated system restart reads on event being monitored, i.e. a reboot indicator) to detect an unexpected reboot (e.g. Fig. 4: step 408/No → step 414 of Fig 5 – Note: interrupted upgrade leading to system reboot - col. 5, lines 8-10, 13-20 - reads on unexpected reboot) during deployment of a modification;

said monitoring comprising: the rollback manager detecting a reboot of the computer (e.g. step 414, Fig. 5 ←- step 408/NO, Fig. 4), and determining based at least in part on the reboot indicator whether the reboot was expected or unexpected (Note: monitor system calling of a forced reboot – step 408/No, Fig. 4 – reads on indicator of a system forced reboot)

responsive to determining that at least one unexpected reboot occurred during the deployment of the modification (e.g. col. 5, lines 6-46; step 408/NO, Fig. 4), the rollback manager rolling back the system state of the computer according to the restore point (e.g. Fig. 2-3; from step 408/No, Fig. 4 → Fig. 5; *earlier, valid state* - col. 6, lines 5-13 – Note: state G and K in Fig. 3 read on recovering to restore a previous stable point G).

Sobel does not explicitly disclose storing a reboot indicator in non-reversible storage; but based on a deployment of upgrade and monitoring of an indication that a recovery program has to be invoked to restore a valid earlier state (e.g. Fig. 2-3), the suggestion that a dynamically monitored event or indication about reboot cannot be part of a reversible storage is fundamentally necessary. Hence, it would have been obvious for one skill in the art at the time the invention was made to provide a runtime storage of a event indicator for reboot by user's command or by system call in terms of reboot instructing or indicator as strongly suggested by Sobel (e.g. col. 4, lines 26-37) so that this indicator not be part of the boot record MBR or recovery FAT system

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(see Fig. 1-2) because partially modified disk as explained in Sobel is unstable (e.g. col. 5, lines 6-46; step 418, Fig 5) so that a cleaning process would have to take place to restore the disk and FAT system to a more stable previous state (e.g. Fig. 2-3), whereby a undisturbed location for this reboot indicator (i.e. storage away from said reversible and unstable sectors as from above) would be readily accessible by Sobel's monitoring, and would thereby dynamically help recovery as long as it takes as intended in Sobel (see Fig. 5; col. 5, lines 35-45) until the system is stable.

As per claim 3, Sobel discloses the rollback manager auditing the computer (e.g. col. 5, lines 37-46) and (in view of obviousness rationale in claim 1) storing in non-revertible storage information concerning at least one currently executing user process (Note: event based user input reads on user process – see col. 4, lines 26-37; Fig. 5 – Note: reboot due to a unplanned failure or a unsafe state reads on underlying port listened to by the interrupt handling system); and

at least one currently open listening port and one system process (Note: event leading to a system reboot or user command disclose listening port).

Sobel does not explicitly disclose audit information being stored in the non-revertible storage. But Sobel discloses the determination by the manager that attempts would have to be repeated to copy a valid FAT system to a place of a failed/invalid file system (e.g. col. 5, lines 23-46); therefore, a effect of comparing data previously recorded (stored audit data in a non-revertible memory) as recovery data with a data recently partially installed (re-audit data) is strongly suggested. It would have been obvious for one skill in the art at the time the invention was made to implement the determination process as described above with a process as to

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comparing of re-audit information to a previously stored audit information as suggested above, because there must be a means to construe when the a properly restored state is achieved (e.g. Fig. 2-3 – Note: state G and K in Fig. 3 read on recovering to restore a previous stable point G), without which the recovery manager would not be able to deem when a properly restored file system would be in place.

As per claim 4, Sobel discloses responsive to determining that no unexpected reboots occurred (Note: no expected reboots treated as successful modification – step 408, YES Fig. 4; step 418, YES – Fig. 5) during the deployment of the modification, and the rollback manager performing an appropriate action responsive to results of the comparison (e.g. col. 6, lines 5-13; Fig. 2).

But Sobel does not explicitly disclose wherein the rollback manager re-auditing the computer and comparing re-audit information to the stored audit information. This audit information being persisted in a non-reversible storage has been addressed in claim 3.

As per claims 5-6, Sobel (in view of the rationale as set forth in claim 4) discloses responsive to the comparison revealing that at least one item from the initial audit is no longer present on the computer (e.g. step 408, NO - Fig. 4; step 418, NO – Fig. 5 – Note: item from previous transition stage after any unexpected reboot and reassessment of previous transition step for rollback -- col 5, lines 63 to col. 6, lines 16; Fig. 1-3 -- reads on audit item no longer present), the rollback manager rolling back the system state of the computer according to the restore point (e.g. Fig. 2-3 – Note: state G and K in Fig. 3 read on recovering to restore a previous stable point G); and responsive to the comparison revealing that all items from the initial audit are still present on the computer, the rollback manager deeming the computer stable (Note: restored state

deemed stable - Fig. 2-3 – Note: state G and K in Fig. 3 read on recovering to restore a previous stable point G).

As per claim 7, Sobel does not disclose clearing the reboot indicator; but in view of the event monitoring in that the indicator applies to only when an unexpected failure is detected (col. 4, lines 26-37), it would have been obvious for one skill in the art at the time the invention was made to reset the storage location reserved for this event indicator in order to enable reuse of the storage for another user application process or system invocation detection.

As per claim 8, Sobel (in view of the rationale as set forth in claim 4) discloses the rollback manager deploying rollback capability on the computer (e.g. Fig. 2-3); and the rollback manager storing, in non-reversible storage, information concerning deployment of the rollback capability on the computer (e.g. MBR, Partition, record – see Fig. 1-4); wherein the rollback manager deeming the computer stable further comprises the rollback manager disabling the deployed rollback capability (Note: disabling a recovery manager when the restoring is achieved is inherent to the restored state K – Fig. 3; see col. 5, lines 42-46 – Note: any middle stage interruption for a reboot due to a failure reads on one disabling instance in the course of a rollback).

As per claim 9, Sobel discloses comparing (by the rollback manager) re-audit information to the stored audit information (re claim 4). And as far as for the limitation as to waiting for a specified period of time before re-auditing the computer, in view of the processing needed to realize the effect of copying files (see col. 5, lines 23-46) a latency is therefore disclosed prior to applying comparing of re-audit information (re claim 4).

As per claim 10, in view of the repeated attempts as set forth by Sobel (e.g. col. 5, lines 23-46) in claim 4, Sobel (in view of the obviousness rationale as set forth in claim 4) discloses repeating a specified number of times at specified intervals (see time periodicity addressed in claim 9):

responsive to determining that no unexpected reboots occurred during the deployment of the modification, the rollback manager re-auditing the computer, and comparing re-audit information to the stored audit information; and the rollback manager performing an appropriate action responsive to results of the comparison (refer to the rationale of claim 4).

As per claims 11-12, Sobel discloses the rollback manager configuring the reboot indicator to indicate that a modification (e.g. step 408-412, Fig. 4; col. 4, lines 26-37) is to be deployed; the rollback manager configuring the reboot indicator to indicate that the deployment of the modification is expected to reboot the computer (Note: configuring system call and user directive as event to monitored reads on configuring of reboot indicator based on which to deploy further copying or reboot and recovery).

As per claim 13, Sobel discloses the rollback manager monitoring deployment of the modification (e.g. Fig. 4-5); and the rollback manager configuring the reboot indicator (refer to claims 11-12) responsive to the deployment (e.g. col. 4, lines 26-37) requesting a reboot of the computer.

As per claim 14, Sobel does not explicitly disclose reading (by rollback manager) the reboot indicator after a reboot of the computer, the reading performed before a booting of an operating system. However, Sobel discloses, responsive to detection of a first unexpected reboot

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during deployment of a modification (step 408/No, Fig. 4), rollback manager reading any subsequent reboot indicator (e.g. step 414, Fig. 5) implicating more forced re-booting possibilities (step 418/NO, Fig. 5) of an operating system; thus have strongly suggested determining whether any reboot after a first restart was unexpected or safe en route to reaching a final system OS secure state. The determination (starting from step 408, Fig. 4) and actions (Fig. 5: step 414 → step 418/NO → step 414) by Sobel's rollback process as to whether effectuate immediate and repeated reboots due to more unexpected failures, as depicted above -- via enforcing necessary and/or as-needed attempts to further stabilize the system O.S. using repeated intermediate reboot -- strongly suggest (if not disclose) the time relationship (reading after a reboot, before a booting) as claimed (see Examiner's Interpretation set forth in 35 USC § 112 rejection). It would have been obvious for one skill in the art at the time the invention was made to implement interpretation (from reading) of a reboot indicator as by Sobel so that such reading is done not only after a forced first reboot of the target system, but also in the event of unexpected results (prior to a final and secure OS reboot) while attempting to put the O.S. to a final secure state as set forth above. One would be motivated to do so because committing all out resources can be taxing as opposed to rebuilding from where an previous state has left off, and by providing as-needed or incremental (see col 5, lines 63 to col. 6, lines 16) recovery via repeated reboots even after unexpected failures (see Fig. 5), Sobell's rollback process can be achieved in having a fully recovered O.S. that is secure with minimized cost based on incremental recovery from transitional stages which are each possibly built from where a previous transitional stage has left off (see Sobel: Summary, and Fig. 1-3; col. 5-6).

As per claim 15, based on the rationale of claim 7 and 14, the limitation as to (the rollback manager) updating the reboot indicator to indicate the occurrence of the reboot would also have been obvious because interrupt triggered system calls have to be addressed as they occur on a absolute immediacy basis so that such type of high-priority event (thus monitored) data are either cleared/discarded or overwritten for immediately re-analyzed in order not to confuse with other runtime or urgent event instances handled by the deep layer of the OS, as depicted by the immediate reboot upon failures by Sobel (see col. 5, lines 42-46).

As per claim 17, Sobel discloses reboot indicator comprising at least one attribute from a group of attributes such as: an indication of whether a reboot is expected (e.g. col. 4, lines 26-37); and

an indication of whether a modification is being deployed (step 408-412, Fig. 4; step 418, YES – Fig. 5), counter of executed reboots (refer to claim 15 for occurrence of reboot to be cleared or updated)

As per claim 18, Sobel discloses the rollback manager deploying rollback capability on the computer (refer to claim 1); and the rollback manager storing, in non-revertible storage, information concerning deployment of the rollback capability on the computer (refer to claim 3).

As per claim 19, Sobel discloses responsive to rolling back the system state of a computer according to the restore point; and the rollback manager disabling the deployed rollback capability (refer to *disabling* limitation being addressed in claim 8).

As per claim 20, Sobel discloses a computer readable storage medium containing a executable computer program product for rolling back a system state after a modification failure, the computer program product comprising program code:

for creating a restore point on a computer;

for monitoring the reboot indicator to detect an unexpected reboot during deployment of a modification; the monitoring comprising detecting a reboot of the computer and determining based at least in part on the reboot indicator whether the reboot was expected or unexpected;

for, responsive to determining that at least one unexpected reboot occurred during the deployment of the modification, rolling back the system state of the computer according to the restore point;

all of which limitations having been addressed in claim 1.

Sobel does not explicitly disclose program code for storing a reboot indicator in non-reversible storage; but this limitation has been addressed in claim 1.

As per claims 22-25, refer to claims 3-6, respectively.

As per claim 26, Sobel discloses a computer system for rolling back a system state after a modification failure, the computer system comprising

a creation module, to create a restore point on a computer; a storage module communicatively coupled with the creation module (refer to claim 1);

a monitoring module, configured to monitor the reboot indicator to detect an unexpected reboot during deployment of a modification, the monitoring module to detect a reboot of the

computer, to determine based at least in part on the reboot indicator whether the reboot was expected or unexpected; the monitoring module being communicatively coupled to the storage module; and

a rollback module, configured to rollback the system state of the computer according to a restore point, responsive to input from the monitoring module concerning the reboot indicator, the computer configuration module being communicatively coupled to the monitoring module; all of which steps having been addressed in claim 1.

However, Sobel does not explicitly disclose a storage module to store a reboot indicator in a non-reversible storage, the storage module communicatively coupled to the creation module. But this non-reversible storage for a reboot indicator has been addressed (as obvious) in claim 1.

As per claim 28, Sobel (in view of the obvious rationale of claim 26) discloses: an auditing module, configured to audit the computer, the auditing module being communicatively coupled to monitoring module and to the storage module; wherein the storage module is further configured to store, in non-reversible storage, *audit* information concerning at least one item from a group of items consisting of:

at least one currently executing system process;
at least one currently executing user process; and
at least one currently open listening port (refer to claim 3 and obviousness rationale addressing audit-information being stored)

As per claim 29, Sobel (in view of the obvious rationale of claim 26) discloses, responsive to input from the monitoring module indicating that no unexpected reboots occurred

during the deployment of the modification; the computer system further comprising a comparison module, configured to compare re-audit information to the stored audit information, the comparison module being communicatively coupled to the auditing module and to the rollback module; wherein the rollback module is further configured to perform an appropriate action responsive to input from the comparison module;

all of which limitations having been addressed in claim 4.

As per claim 30, Sobel discloses wherein:

the rollback module is further configured to rollback the system state of the computer according to the restore point, responsive to input from the comparison module indicating that at least one item from the initial audit is no longer present on the computer (refer to rationale set forth in claim 5).

As per claim 31, Sobel discloses: a stability deeming module, configured to deem the computer stable, responsive to input from the comparison module indicating that all items from the initial audit are still present on the computer, the stability deeming module being communicatively coupled to the comparison module (refer to claim 6).

As per claim 32, Sobel discloses computer implemented method for auditing a computer system state, the method comprising the steps of: a rollback manager auditing the computer (refer to claim 1); (in view of the obviousness rationale as set forth in claim 1 regarding *non-reversible storage*) discloses storing in non-reversible storage information concerning at least one item from a group of items consisting of

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at least one currently executing system process; at least one currently executing user process (refer to claim 3); and at least one currently open listening port (refer to claim 3).

Response to Arguments

8. Applicant's arguments filed 12/27/07 have been fully considered but they are not persuasive. Following are the Examiner's observation in regard thereto.

Double Patenting Rejection:

(A) The amended claim 1 now include substantial new subject matter; hence the argument is no longer commensurate with the rationale of the latest grounds of Rejection which has been necessitated because of the changed scope of instant claim 1.

35 USC § 112, 2nd paragraph Rejection:

(B) As amended, the claimed subject matter of claim 14 cannot overcome the indefiniteness of the language being used. The reasons therefor have been set forth in the current Rejection.

35 USC § 103(a) Rejection:

(C) Applicant has submitted that unexpected reboot determination can benefit the system deployment in terms of system being possibly left in a unknown and undesired state, and that for claim 1, Sobel's process of modification of FAT does not address whether a reboot is determined for its being unexpected or not, for Sobel always runs a recovery program 130 (Appl. Rmrks pg 15, middle). The interpretation of unexpected or expected reboot is that when a system triggered event like a forced reboot occurs, unexpected results would be inherent in case cause for this forced reboots would be left un-addressed; that is, any reboot due to sudden interruption of a intended process of replacement as in Sobel's FAT system, entails the interpretation that they are unexpected because they are not programmed but happened as alarm type of events to handle

with utmost urgency. Determination of existence of a interrupt or a forced reboot --as is the case in Sobel's transitional and incremental stages of recovery -- can be construed also as determination as to whether the reboot is expected or wanted (a safe state), as opposed to unwanted (as in sudden threat to the safety of the system, i. e. unexpected alarm event). The weight of 'unexpected' or 'expected' is therefore based on whether the reboot (see Sobel Fig. 4-5) is (i) because of a sudden recognition of a unplanned failure or (ii) a desire to normally restart a system (step 408/YES Fig. 4 using a safe MBR). Sobel does provide such immediate (reboot) determination then immediate remedying actions subsequent to recognizing such reboot event in either (i) or (ii) form (see Rejection). The argument is deemed not sufficient to overcome the rejection.

(D) Applicant has submitted that for claim 32 reciting of audit information concerned with item from a group; and that Sobel does not disclose any item from such group (Appl. Rmrks, pg. 16, bottom). The rejection has pointed to a user input as example of a port listened to by the application, as an example, when in fact any port that listens to a hardware-based interrupt corresponding to (interrupt triggered by a sudden threat leading to request for) a reboot (see Fig. 5) can be easily be proffered to map the recited listening port. The argument is not persuasive. The argument (Appl. Rmrks pg. 17) that the Examiner misunderstands or misinterprets 'process' is deemed as having no impact whatsoever in justifying or proving how Sobel fails to fulfill any one item listed in the group as claimed; thus, will be considered moot in view of the above analysis regarding a listening port.

In all, the claims stand rejected as set forth in the Office Action.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (571) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tuan A Vu/

Primary Examiner, Art Unit 2193

March 5, 2008